

OPENING STATEMENT

Ranking Member Eric Swalwell
Subcommittee on Energy
Committee on Science, Space, and Technology

Hearing of the Energy Subcommittee
“*Fusion Energy: The World’s Most Complex Energy Project*”

July 11, 2014

Thank you Chairman Lummis for holding this hearing, and I also want to thank this excellent panel of witnesses for their testimony and for being here today.

Fusion holds the promise of providing a practically limitless supply of clean energy to the world. We’re actually already dependent on it – the energy we get from that fusion reactor in the sky, better known as the sun, is essential to the existence of life on Earth, including us. Of course, it’s a bit trickier for people to replicate what the stars are able to do with sheer gravity. But from my conversations with some of the top fusion researchers in the world – and not just at Lawrence Livermore’s National Ignition Facility, which I happen to represent – I believe we’re getting there. This is why I am such a strong supporter of fusion energy research, and I believe that now is the right time to build and operate experiments that can finally demonstrate that a man-made fusion system can consistently produce far more energy than it takes to fuel it.

For the magnetic fusion approach, that next step is clearly ITER. ITER is designed to produce at least ten times the energy it consumes, and would be the first experiment of its kind that enables our researchers to explore and test the behavior of a system where the fusion process itself provides the primary heat source to sustain its high fusion reaction rate, also called a “burning plasma”. As discussed in a seminal report by the National Academies entitled *Burning Plasma—Bringing a Star to Earth*, as well as subsequent reports, this experiment is absolutely essential to proving that magnetically confined fusion can be a viable clean energy source.

That said, I have several concerns which I hope we can address in this hearing. By all accounts, the U.S. ITER Project Office, under the direction of Dr. Ned Sauthoff who is here today, is very well managed and doing everything it can to contain costs and maintain an aggressive schedule. But the 2013 ITER Management Assessment to the project’s governing ITER Council found serious issues with the international organization’s management practices, including an overall “lack of urgency” to complete the project on time and on budget due to various cultural and accounting practices among a number of the project’s partners. I’m told that the new ITER Council Chair, Dr. Robert Iotti, who is also here today, is taking this Assessment very seriously, and working to adopt its recommendations and address the issues that the review identified. I look forward to learning more about Dr. Iotti’s progress toward these goals shortly.

I am also concerned about the Administration’s proposed \$225 million cap on annual funding for the U.S. contribution to ITER, which they have justified solely by stating that this allows sufficient funding for the remainder of the Office of Science’s fusion program. This justification,

however, falsely assumes that the Administration couldn't simply request a higher budget for fusion in a particular year, as it does for other programs when they have projects with significant construction cost profiles. The \$225 million cap was not based on a bottom-up project estimate that minimizes the total cost for the U.S. ITER contribution, but rather a political calculation. This level falls well below what is necessary to optimize the project schedule and minimize the total cost to taxpayers. As I believe both Dr. Sauthoff and Dr. Dehmer would agree, such underfunding inevitably leads to larger total project costs because the highly skilled teams required for management and construction of our components are essentially "standing armies" that need significant annual resources even if budget reductions force the project schedule to be extended. Moreover, even though some other ITER partners are not currently meeting their deadlines, my understanding is that much of what the U.S. is responsible for is or can be decoupled from their activities. So we could have a far more aggressive, cost-effective schedule to fabricate our components and have them stored until they are ready to be integrated into the reactor complex. I look forward to discussing the potential for this path forward with the panel as well.

Given the critical importance of ITER to determining the viability of fusion as a clean energy source, and the major contributions of U.S. researchers to advancing the science and engineering of the field to this point, I maintain strong support for this project along with the other key components of the broader U.S.-based fusion research program. However, this does not mean we can support an unconditional blank check. The U.S. must maintain vigorous oversight and use every means available with our international partners to contain cost and schedule, all while keeping an unwavering focus on achieving the project's incredibly important goals for our and the world's energy future.

Thank you, and with that I yield back the balance of my time.